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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,587	03/01/2004	Erik Cardelius	P04,0024	9603

7590 04/04/2005

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EXAMINER

SUN, XIUQIN

ART UNIT PAPER NUMBER

2863

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/790,587

Applicant(s)

CARDELIUS ET AL.

Examiner

Xiuqin Sun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/13/04 and 9/24/05</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hocht (U.S. Pat. No. 4123934) in view of Mitchell (U.S. Pat. No. 4623264).

Hocht teaches a calibration apparatus for a resistance thermometer comprising: a reference thermometer adapted for thermal interaction with a gas composition for generating a first reference temperature value for the gas composition at a first temperature (col. 2, lines 26-51).

Hocht does not teach: an acoustic meter adapted for acoustic interaction with said gas composition for obtaining an acoustic velocity-related measurement of said gas composition for use in generating a second reference temperature value for said gas composition at a second temperature; said acoustic meter also obtains an acoustic velocity-related measurement for the gas composition at said first temperature also for use in generating the second reference temperature value.

Mitchell teaches an acoustic meter adapted for acoustic interaction with a gas composition for obtaining an acoustic velocity-related measurement of said gas

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composition for use in generating a temperature measurement for said gas composition at a given temperature (col. 4, lines 9-30; col. 5, lines 22-50). The teaching of Mitchell also includes: said acoustic meter also obtains an acoustic velocity-related measurement for the gas composition at a first temperature also for use in generating a second temperature measurement value (col. 4, lines 9-30; col. 5, lines 22-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Mitchell in the invention of Hoht in order to provide a simple and effective mechanism and procedure for determining the temperature of a fluid, which can be used in calibrating a temperature measurement device of the fluid (col. 1, lines 7-22 and 61-67 and col. 2, lines 1-12 and lines 50-54).

#### ***Allowable Subject Matter***

3. Claims 3-6 are allowed.

#### ***Reasons for Allowance***

4. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 3 and 4 is the inclusion of the limitation of: a calibration unit supplied with said first and second temperature values and said acoustic velocity-related measurement for determining a calibration relationship for the temperature thermometer from the first and second reference temperature values and from measurement values of the first and second temperatures supplied by the resistance thermometer. It is this limitation found in each of the claims,

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as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 5 and 6 is the inclusion of the method steps of contemporaneously obtaining an acoustic velocity-related measurement value of said gas composition with an acoustic meter for use in determining a second reference temperature value, and obtaining a second measurement temperature value using the resistance thermometer, and supplying said second reference temperature value and said second measurement temperature value to a calibration unit; and in said calibration unit, determining a relationship from the first and second temperature values and the first and second measurement values, and calibrating said resistance thermometer using said relationship. It is these steps found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280.


The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Xiuqin Sun  
Examiner  
Art Unit 2863

XS  
03/28/05

  
MICHAEL NGHIEM  
PRIMARY EXAMINER